

REMARKS

This Amendment is responsive to the Office Action identified above, and is further responsive in any other manner indicated below.

PENDING CLAIMS

Claims 1-26 were pending, under consideration and subjected to examination in the Office Action. Appropriate claims have been amended, canceled and/or added (without prejudice or disclaimer) in order to adjust a clarity and/or focus of Applicant's claimed invention. That is, such changes are unrelated to any prior art or scope adjustment, and are simply refocused claims in which Applicant is presently interested. At entry of this paper, Claims 1-28 will be pending for further consideration and examination in the application.

ALLOWED CLAIMS

Claims 10 and 19 have been allowed in the application, as indicated within the Office Action. Applicant and the undersigned respectfully thank the Examiner for such indication of allowable subject matter.

WITHDRAWAL OF PRIOR REJECTIONS

Applicant and the Undersigned respectfully thank the Examiner for withdrawal of ones of the prior rejections.

35 USC '112, 1ST PARAGRAPH REJECTION - TRAVERSED

Claims 21, 22, 24 and 25 have been rejected, under 35 USC '112, first paragraph, for the concerns listed within the item 5 beginning on page 3 of the Detailed Action of the Office Action. Applicant respectfully traverses. More particularly, regarding the limitations of "the second flat and smooth incoming window for introducing the excitation beam into the planar plate and the at least one access opening are accessible from mutually differing sides of the planar plate", Applicant's original FIGS. 1 and 6, for example, illustrate access openings 71-73 and the second window (receiving an excitation beam from excitation source 900) on mutually differing sides. In addition, the disputed word "normally" has been removed from each of claims 21, 22, 24 and 25.

Based upon the foregoing, reconsideration and withdrawal of the above-referenced rejection are respectfully requested.

REJECTION UNDER '112, 2ND PAR. OBTIATED VIA CLAIM AMENDMENT

Claims 21, 22, 24 and 25 have been rejected under 35 USC '112, second paragraph, as being indefinite for the concerns listed within the section numbered "7" on page 4 of the Office Action. Such claims have been carefully reviewed and carefully amended where appropriate in order to address the Office Action listed concerns, i.e., the disputed word "normally" has been removed from each of claims 21, 22, 24 and 25. As the foregoing is believed to have addressed all '112 second paragraph concerns, reconsideration and withdrawal of the '112 second paragraph rejection are respectfully requested.

REJECTIONS UNDER 35 USC §103-TRAVERSED

All 35 USC §103 rejections are respectfully traversed. Such rejections have been rendered obsolete by the present clarifying amendments to Applicant's claims, and accordingly, traversal arguments are not appropriate at this time. However, Applicant respectfully submits the following to preclude renewal of any such rejections against Applicant's clarified claims.

All descriptions of Applicant's disclosed and claimed invention, and all descriptions and rebuttal arguments regarding the applied prior art, as previously submitted by Applicant in any form, are repeated and incorporated herein by reference. Further, all Office Action statements regarding the prior art rejections are respectfully traversed. As additional arguments, Applicant respectfully submits the following.

In order to properly support a §103 obviousness-type rejection, the references must suggest the claimed features. However, the cited art does not adequately support a §103 obviousness-type rejection because it does not, at minimum, disclose (or suggest) the following limitations of Applicant's clarified claims.

More particularly, Applicant's disclosed and claimed invention is directed to electrophoretic separation arrangements which are easy/cheaper to manufacture, which can be manufactured consistently with high quality/fidelity, which can reduce background/stray light contamination, and which can analyze samples with high speed. One important feature of Applicant's invention is a planar plate that integrally includes a number of items integrally-molded therein. For example, FIG. 6 shows a planar plate 10 which includes numerous items including optical components (e.g., excitation focusing lenses 41). By having items integrally-molded therein (resultant

from molding manufacturing), optical alignments can be made ahead of time by using a die designed to afford automatic alignment of the planar plate items during manufacture.

In terms of claim language, independent Claim 1, for example, contains the features/limitations "...**at least one optical lens, filter or grating component**, ... wherein the planar plate has the channel, the at least one lens, filter or grating optical component, the first flat and smooth incoming window, the second flat and smooth incoming window, the excitation transmission path, the first flat and smooth outgoing window, the second flat and smooth outgoing window and the fluorescent transmission path, **all integrally-molded therein**."

Regarding the applied art, none of JP 09288090, JP 11-352102 or Simpson (alone, or in combination) disclose or suggest a planar plate having all such items (and especially the "**at least one optical lens, filter or grating component**") integrally-molded therein. More particularly, while JP 09288090 shows (FIG. 1) an optical fiber 22, light filter 37, such components are disclosed as being discretely provided separately from JP 09288090's substrate 14. Such is consistent with the approach in the art to provide such items discretely, so that the items could be reused for substrate-to-substrate (e.g., for reduced cost). JP 11-352102 appears not to disclose any type of optical component (especially not any optical lens, filter or grating component). Finally, while Simpson shows (FIG. 2A) a focusing lens 226, transmission dispersion element 224, filter 236 and collection lens 222, such components are disclosed as being discretely provided separately from Simpson's substrate. Again, such is consistent with the approach in the art to provide such items discretely, so that the items could be reused for substrate-to-substrate (e.g.,

for reduced cost). In addition, it is respectfully noted that Simpson appears to teach that only the channels are formed by molding or casting, and that any other item beyond the channels is formed using other methods. For example, Simpson's column 24, lines 60-63 teaches that, "After formation ... features such as slots for buffer access or holes which serve as sample infection ports are easily machined such as by laser cutting."

To summarize, none of the references or combination thereof suggests or discloses Applicant's molded "at least one optical lens, filter or grating component", and Simpson (the only reference mentioning molding) tends to teach that such components would be provided as discrete separate components (from the substrate) or would be formed by methods other than molding.

None of any other applied references cure the major deficiency mentioned above with respect to the three main applied references.

Mention of the following additional arguments are warranted. More particularly, concerning the prior dispute whether the vague disclosure/drawings of JP 09288090 teach channels of a "rectangular cross-section", such dispute has been rendered moot considering "rectangular" has been removed from Applicant's independent claims. Further, it appears that JP 11-352102 discloses "rectangular grooves".

Next, Office Action comments (page 17, last paragraph) attempt to characterize Applicant's "integrally molded therein" limitations as "product-by-process" limitations, and appear to attempt to accordingly give such "integrally molded therein" limitations NO OR LITTLE patentable weight. Strong traversal is appropriate.

More particularly, first, it is respectfully submitted that such are NOT product-by-process limitations, but are product limitations. That is, taking Applicant's claimed "channel", for example, Applicant's claimed limitations mean an "integrally-molded channel", which is a product. That is, if one of Applicant's substrates is given to a skilled artisan without any information as to how such substrate was formed, Applicant's channels would have distinctive characteristics (e.g., very smooth walls, very sharp rectangular shape) which would allow the skilled artisan to recognize (e.g., by microscope examination) that Applicant's channels were "integrally-molded channels". Since Applicant's "integrally-molded therein" limitations pertain to product limitations, such must be afforded patentable weight by the Examiner.

It is respectfully submitted that if Applicant's claims were "product-by-process" claims, such claims would have instead recited, for example, "wherein the planar plate has the channel, the at least one lens, filter or grating optical component, the first flat and smooth incoming window, the second flat and smooth incoming window, the excitation transmission path, the first flat and smooth outgoing window, the second flat and smooth outgoing window and the fluorescent transmission path, all formed using the process of molding."

Even assuming arguendo, that such limitations are "product-by-process" limitations, it is respectfully submitted that such still must be afforded patentable weight by the Examiner. More particularly, MPEP 2173.05(p) states (in relevant part) that, "A product-by-process claim, which is a product claim that defines the claimed product in terms of the process by which it is made, is proper." MPEP 2173.05(p) cites a number of legal cases, including *In re Luck*, 476 F.2d 650, 177

USPQ 523 (CCPA 1973), which states the proposition (regarding product-by-process limitations within a product claim) that, "To the extent ...[that] process limitations distinguish the product over the prior art, they must be given the same consideration as traditional product characteristics."

Other Office Action comments regarding JP 09288090 assert that certain regions of regarding JP 09288090's channels represent arrangements analogous to Applicant's first and second flat and smooth incoming window, and first and second flat and smooth outgoing window. Traversal is again appropriate, because such statement is also pure (and improper) speculation. More particularly, JP 09288090 nowhere describes the shapes and/or flatnesses of such grooves regions (or how they are formed, which might give some insight into flatness, etc.), and there is insufficient detail provided in JP 09288090's minute drawings to allow such speculation.

As a result of all of the foregoing, it is respectfully submitted that the applied art (taken alone and in the Office Action combinations) would not support a §103 obviousness-type rejection of Applicant's claims. Accordingly, reconsideration and withdrawal of such §103 rejection, and express written allowance of all of the §103 rejected claims, are respectfully requested.

RESERVATION OF RIGHTS

It is respectfully submitted that any and all claim amendments and/or cancellations submitted within this paper and throughout prosecution of the present application are without prejudice or disclaimer of any scope or subject matter. Further, Applicant respectfully reserves all rights to file subsequent related

application(s) (including reissue applications) directed to any/all previously claimed limitations/features which have been subsequently amended or cancelled, or to any/all limitations/features not yet claimed, *i.e.*, Applicant continues (indefinitely) to maintain no intention or desire to dedicate or surrender any limitations/features of subject matter of the present application to the public.

EXAMINER INVITED TO TELEPHONE

The Examiner is invited to telephone the undersigned at the local D.C. area number 703-312-6600, to discuss an Examiner's Amendment or other suggested action for accelerating prosecution and moving the present application to allowance.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims listed above as presently being under consideration in the application are in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

To whatever other extent is actually necessary, Applicant respectfully petitions the Commissioner for an extension of time under 37 CFR §1.136. Please charge

any actual deficiency to ATS&K Deposit Account No. 01-2135

(Case No. 500.41074X00).

Respectfully submitted,



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